CLAIMS:

1. A limited play optical storage media, comprising:

an optically transparent substrate;

a reflective layer;

an oxygen penetrable UV coating disposed on a side of said substrate opposite said reflective layer; and

a reactive layer disposed between said UV coating and said substrate, said optical storage media having an initial percent reflectivity of about 50% or greater and a subsequent percent reflectivity of about 45% or less.

2. A limited play optical storage media as in Claim 1, wherein said substrate comprises polycarbonate produced from a bis(hydroxyaryl) cycloalkane.

3. A limited play optical storage media as in Claim 2, wherein said bis(hydroxyaryl) cycloalkane comprises 1,1-bis(4-hydroxyphenyl) cyclohexane.

4. A limited play optical storage media as in Claim 1, wherein said substrate comprises a thermoplastic having a glass transition temperature of about 100°C or greater.

5. A limited play optical storage media as in Claim 1, wherein said substrate is selected from the group consisting of polyimides, polyacrylates, polycarbonates, polyphenylene ethers, and mixtures, copolymers, reaction products, and composites comprising at least one of the foregoing thermoplastics.

6. A limited play optical storage media as in Claim 5, wherein the substrate is selected from the group consisting of polycarbonates, polyacrylates, and copolymers and combinations comprising at least one of the foregoing.

7. A limited play optical storage media as in Claim 1, wherein the substrate is selected from the group consisting of polyphenylene ether, polystyrene, and copolymers and combinations comprising polyphenylene ether and polystyrene.

8. A limited play optical storage media as in Claim 1, wherein said UV coating is selected from the group consisting of acrylates, silicon hardcoats, nonacrylic UV curable aliphatically unsaturated organic monomers, and reaction products and combinations comprising at least one of the foregoing UV coatings.

9. A limited play optical storage media as in Claim 8, wherein said UV coating comprises thermal cross-linked acrylates.

10. A limited play optical storage media as in Claim 8, wherein said UV coating comprises diacrylate, a triacrylate, N-vinyl pyrrolidone, styrene, and reaction products and combinations comprising at least one of the foregoing UV coatings.

11. A limited play optical storage media as in Claim 8, wherein said reactive layer further comprises polymethylmethacrylate/leuco methylene blue.

12. A limited play optical storage media as in Claim 1, wherein said reactive layer further comprises a reactive material selected from the group consisting of oxygen sensitive leuco methylene blue, reduced forms of methylene blue, brilliant cresyl blue, basic blue 3, toluidine 0, and combinations comprising at least one of the foregoing reactive materials.

13. A limited play optical storage media as in Claim 1, wherein said reactive layer further comprises about 0.1 wt% to about 10 wt% reactive material, based upon a total weight of said reactive layer.

14. A limited play optical storage media as in Claim 13, wherein said reactive layer further comprises about 3 wt% to about 7 wt% reactive material, based upon a total weight of said reactive layer.

15. A limited play optical storage media as in Claim 14, wherein said reactive layer further comprises about 4 wt% to about 6 wt% reactive material, based upon a total weight of said reactive layer.

16. A limited play optical storage media as in Claim 1, wherein said reactive layer further comprises a carrier selected from the group consisting of thermoplastic acrylic polymers, polyester resins, epoxy resins, polythiolenes, UV curable organic resins, polyurethanes, thermosettable acrylic polymers, alkyds, vinyl resins, and reaction products and combinations comprising at least one of the foregoing carriers.

17. A limited play optical storage media as in Claim 16, wherein said carrier is selected from the group consisting of reaction products of aliphatic dicarboxylic acids; monomeric, dimeric, oligomeric or polymeric epoxy material comprising at least one epoxy functional group; polyolefins, polythiols, and combinations comprising at least one of the foregoing carriers.

18. A limited play optical storage media as in Claim 17, wherein said carrier is selected from the group consisting of ethyleneglycol; propyleneglycol; neopentylglycol; reaction products of bis phenol-A and epichlorohydrin; reaction products of epichlorohydrin with phenol-formaldehyde resins; acrylic acid ester monomers; and combinations comprising at least one of the foregoing carriers.

19. A limited play optical storage media as in Claim 1, wherein said subsequent percent reflectivity is about 30% or less.

20. A limited play optical storage media as in Claim 1, wherein said subsequent percent reflectivity is about 20% or less.

21. A limited play optical storage media as in Claim 1, wherein said subsequent percent reflectivity remains at 45% or less even if said optical storage media is exposed to bleach.

22. A limited play optical storage media as in Claim 1, further comprising a data storage layer disposed between disposed between said substrate and said reflective layer, wherein said data storage layer comprises an organic dye.

23. A limited play optical storage media as in Claim 1, further comprising a data storage layer disposed between disposed between said substrate and said reflective layer, wherein said data storage layer comprises inorganic phase change compound.

24. A limited play optical storage media as in Claim 1, further comprising a data storage layer disposed between disposed between said substrate and said reflective layer, wherein said data storage layer comprises a material selected from the group consisting of rare earth element – transition metal alloy, nickel, cobalt, chromium, tantalum, platinum, terbium, gadolinium, iron, boron, and alloys and combinations comprising at least one of the foregoing materials.

25. A limited play optical storage media, comprising:

an optically transparent substrate;

a reflective layer;

an oxygen penetrable UV coating disposed on a side of said substrate opposite said reflective layer, wherein said UV coating allows a reflectivity from said optical storage media of about 50% or greater; and

a reactive layer disposed between said UV coating and said substrate, said optical storage media having an initial percent reflectivity of about 50%, said reactive layer comprising polymethylmethacrylate/leuco methylene blue.

26. A method for limiting access to data disposed on a data storage media, comprising:

directing a light toward at least a portion of said data storage media, wherein at least a portion of said light passes through a UV coating, a reactive layer, and a substrate;

reflecting at least a portion of said light back through said substrate, said reactive layer, and said UV coating; and

reducing a percent reflectivity of said data storage media to less than about 45%.

27. A method for limiting access to data disposed on a data storage media as in Claim 26, wherein said percent reflectivity is about 30% or less.

28. A method for limiting access to data disposed on a data storage media as in Claim 27, wherein said percent reflectivity is about 20% or less.

29. A method for limiting access to data disposed on a data storage media as in Claim 28, wherein said percent reflectivity is about 15% or less.

30. A method for limiting access to data disposed on a data storage media as in Claim 26, wherein said reactive layer further comprises polymethylmethacrylate/leuco methylene blue.

31. A method for limiting access to data disposed on a data storage media as in Claim 26, wherein said reactive layer further comprises about 0.1 wt% to about 10 wt% reactive material, based upon a total weight of said reactive layer.

32. A method for limiting access to data disposed on a data storage media as in Claim 31, wherein said reactive layer further comprises about 3 wt% to about 7 wt% reactive material, based upon a total weight of said reactive layer.